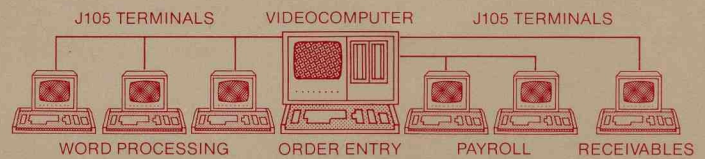


Jacquard's Multi-TrackingTM Keeps You Ahead Of The Pack!



**In Hunting For A Computer
It's Not The Hardware That
Gives You
The Edge.**





Judging small business computer systems by their hardware alone is much like comparing the fox to the hound. Both are cousins and have the identical inventory of parts. But the fox has a superior ability that keeps him ahead of the pack. How? Through superior programming. So if you're a newcomer to the hunt, beware. Computers are often not what they seem, and you could get badly bitten.

A Small Business Computer Isn't Really Suited to Small Business Functions if It Needs a Lot of Costly Add-Ons to Make It Run. What's needed is a true small system. One flexible enough to do a lot of small tasks simultaneously, yet powerful enough to do larger, demanding applications, too.

One that doesn't cost an arm and a leg to buy or lease.

One that can grow economically, as your business grows.

And one with a good service organization to keep your mind at ease.

What's needed is the latest minicomputer technology with powerful systems software that makes the most of the computer's memory.

To accomplish this you must have a company with total systems manufacturing ability. Because this kind of system needs software and hardware made-for-each-other.

Jacquard's Videocomputer™ with Multi-Tracking™ System Software is the one you need. The combination is designed so you can easily upgrade applications and plug in new stations without costly additions.

We were able to create this system because we started with the problem, not the solution.

The Bigger You Get the Better We Look. The Videocomputer can be used for multiple applications (i.e. payroll and word processing) and multiple tasks within those applications (i.e. sorting and filing) by any number of users simultaneously. So, in a clustered terminal situation the average cost per work station drops dramatically.

Our Application Packages Complement the System's Unique Design. Our set of accounting programs include General Ledger, Accounts Receivable, Accounts Payable and Payroll. They are designed so that a multiple terminal installation can use information from different companies, accounting periods and applications concurrently.

The program's financial reports can be varied in content and format without the operator needing special technical abilities. And because the programs are interactive and conversational, with step-by-step operating instructions, they are easy to use.

Word Processing. The system allows users to draft, store, recall, modify, append, edit, format and print any type of business correspondence or documents, from interoffice memos to high-volume direct mail campaigns. While letters and data are being printed, terminals are free for drafting new material. Address lists can be sorted by 20 different criteria.

A Lot Better in the Long Run. If your needs are for data processing now and word processing later, or data entry now and distributed processing later, Jacquard's flexibility and cost/power ratio is where to start. And because small businesses are everywhere, our service organization has 160 locations.

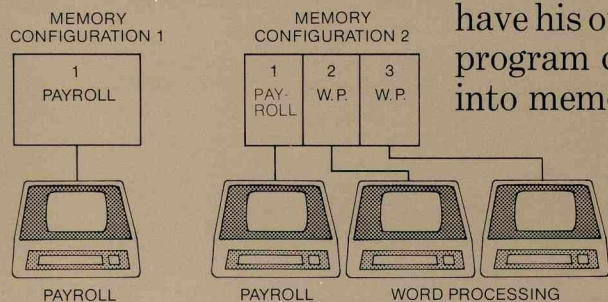
The Videocomputer Has A Foxy Way To Use Memory.



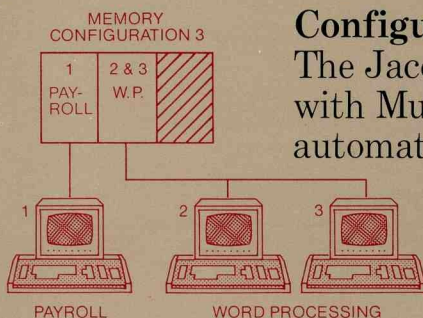
Small businesses have the same functions as large businesses. All make out payroll, keep accounting information, enter orders and carry on marketing communications. So when you purchase your small business system, be sure it comes with a memory flexible enough to handle those multiple functions simultaneously.

Pick a System that Keeps You Out in Front! The most common system is the Small Business Computer, **Configuration 1.** This down-sized version of the Business Computer allows only one user and application to be stored in memory at a time. Its flexibility can only be improved by costly modification.

Configuration 2. It represents a Multi-Programming System that can keep track of multiple terminals, but each user must have his own program copied into memory.



If all stations are to work simultaneously you must add memory with every user.



Configuration 3. The Jacquard System with Multi-Tracking automatically generates re-entrant code. This means once a program is entered

into memory it serves any number of users simultaneously. As shown, terminals 2 & 3 are sharing the word processing program. This allows the Jacquard System to conserve valuable memory by

doing with one application, what the Multi-Programming System needs several to accomplish. Therefore, as your work load expands or in overload situations, terminals can be added or switched without causing system overloads even with large programs.

Our Time Sharing and Time Slicing Capabilities Increase Thruput.

Because the Videocomputer was designed for multiple users and uses it distributes processing power among all tasks concurrently. This allows the system to simulate direct access between terminal and processor, allowing each operator to receive instantaneous answers.

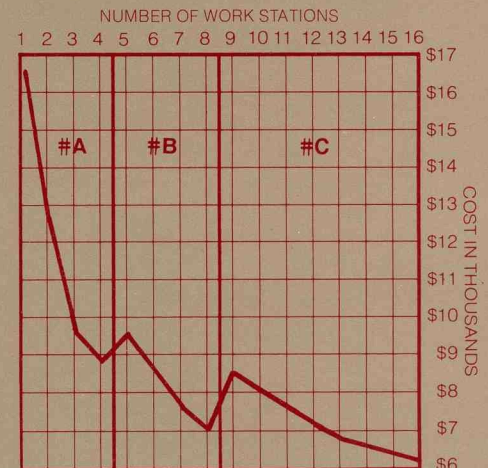
Our background mode enhances thruput by freeing terminals for new tasks while printing or calculations are executed.

The Average Cost per Work Station Drops as You Grow.

#A: Floppy disk systems with one printer and word processing software.

#B: 12 MB disk systems with 2 printers and word processing software.

#C: 24 MB disk systems, 2 high quality printers, one fast printer (rough drafts) and word processing software.



This is how our powerful made-for-each-other hardware/software can keep you ahead of the one track pack economically.

Computers that can't automatically generate re-entrant code have a one track mind.



A Made-For-Each-Other Hardware/Software System Made For You.

Jacquard's Videocomputer is a versatile business-oriented data processing system designed to provide high performance at low cost in small business and distributed data processing applications. The system is a self-contained, stand alone input/output unit designed for on-line access to a computer and for off-line utility functions.

The J100 may be utilized in a remote environment with appropriate communication facilities or it may be connected directly to an input/output port for local application. Since each Videocomputer has a central processor unit, the system can be reconfigured without product obsolescence.

The J105 Satellite CRT. The J105 was designed to interface with the Videocomputer so a complete user station can be operated remotely. An operator can communicate directly with the data base.

The keyboard is identical and interchangeable with the Videocomputer's keyboard and a maximum of 29 Satellite CRT's can be connected to the Videocomputer from distances of 1000 feet.

When the J105 is connected to the Videocomputer it becomes an independent work station and its memory becomes an integral part of the processor's memory, allowing more processing power for computation, data manipulation and data communication. The result is a higher level of performance than with systems whose CRT's are serial devices.

Attachment of a printer to the Videocomputer permits reports to be generated directly, or as a result of calculations and data manipulation performed by the processor after data entry at the keyboard. The entire operation, including the original data entry, can be conducted by the user from his station.

Diskettes. Two "IBM 3740 format compatible" diskettes have a storage capacity of 250K bytes. Programs and data may be stored on either unit. Each diskette is a random access storage device and can retrieve data quickly.

Hardware Features.

16 Bit CPU: High throughput, low instruction overhead, more efficient processing.

Up to 128K bytes of memory: Sufficient user and program areas without swapping.

Non-Volatile Memory: No expensive and time consuming loss of stored data in the event of an untimely power loss.

True Interrupt Facility: Efficient real-time capability needed for timesharing, I/O and communications applications.

DMA (Direct Memory Access): Low I/O overhead-increased performance, concurrent processing and I/O, increased throughput, easy use of high speed peripherals.

1920 Character CRT (80 x 24): Allows almost a full typewritten page to be displayed simultaneously, provides increased format flexibility.

Two Built-in Diskettes: High reliability—no troublesome cartridges or cassettes, random access to a half million bytes of data, no waiting for serial access.

Programmable Status Lights: User programmable to provide positive indications without occupying precious CRT space.

Satellite CRT Refresh from sections of main memory: Tremendous reduction in system overhead in multi-CRT time-sharing applications resulting in much higher performance levels.

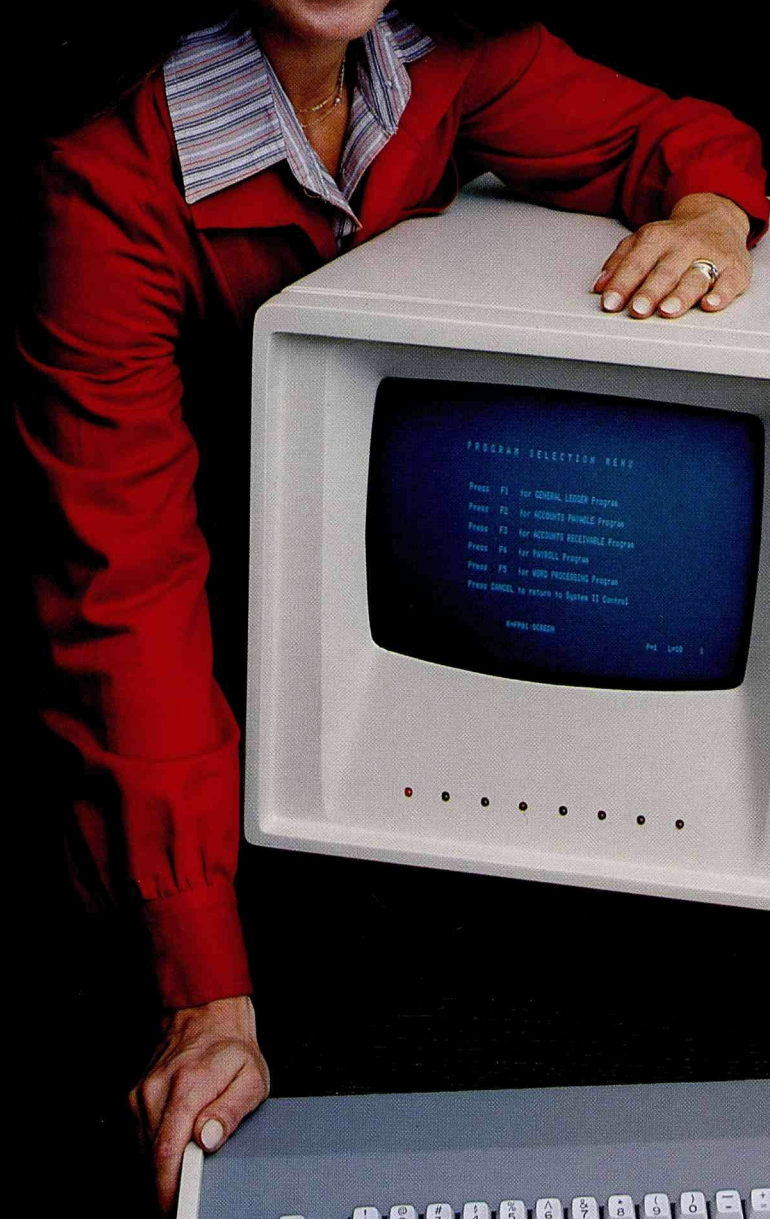
Movable Keyboard on main and satellite units: Flexibility in work station layout—the unit fits the station and not the opposite.

Simple noncomputer appearance, minimum controls: Easy to learn to operate, fits into the modern office environment.

Optional plug-in full computer console: Provides full computer controls and indicators when desired, can be used but is not required for debugging, etc.

Expansion room within main unit for additional plug-in devices and controllers: Cost of special furniture and cabinetry virtually eliminated in all but the largest systems.

Clear Your Desk, Plug Us In.



PROGRAM SELECTION MENU

Press F1 for GENERAL LEDGER Program
Press F2 for ACCOUNTS PAYABLE Program
Press F3 for ACCOUNTS RECEIVABLE Program
Press F4 for INVENTORY Program
Press F5 for WORD PROCESSING Program
Press SPACE to return to System II Control

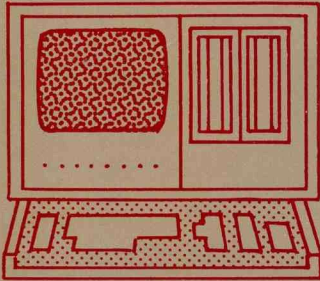
WANG 1000000



JACQUARD SYSTEMS



The Videocomputer consists of a 16-bit general purpose digital computer which incorporates state-of-the-art processor technology for data manipulation. The system incorporates 32K bytes of memory for storage of data and programs, with main frame memory expansion of up to 128K bytes of storage.



J100 Videocomputer Processor

Word Size: 16 Bits
Memory Size: Up to 128K bytes
4 Accumulators
Status Register
3 Buses
Push Down Stack — 16 Deep
Direct Memory Access — 667K bytes/second
External Interrupt
Real Time Clock
Power Fail Automatic Restart
Powerful instruction set
Height: 17.5 inches
Width: 23.5 inches
Depth: 23 inches
Weight: 90 lbs.
Master and Keyboard
Total Depth: 29 inches

Keyboard

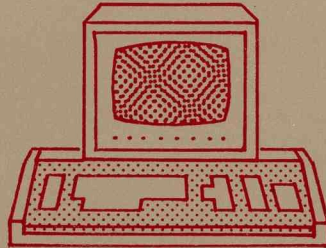
Movable via cable
Full Upper/Lower ASCII
Key Layout
Numeric Pad (11 Keys)
Programmable Function Keys (10)
Edit/Function Keys (10)
"n" Key Rollover
Height: 3.5 inches
Width: 20.75 inches
Depth: 9 inches
Weight: 9 lbs.

CRT Display

12 inch CRT
80x24 Format
High Resolution Characters
Full ASCII Character set
High Contrast
Low Reflectance face plate
No flicker
Update at CPU memory speed

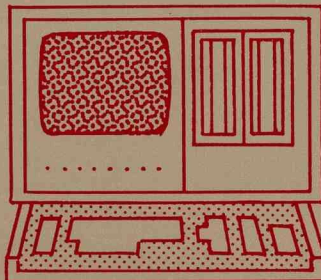
Diskettes

2 Drives built-in
Industry compatible format
Approximately 250K bytes/drive
Provision for 2 additional drives
Random Access
Removable Media
Direct memory access
Can be used for storing programs and /or data files



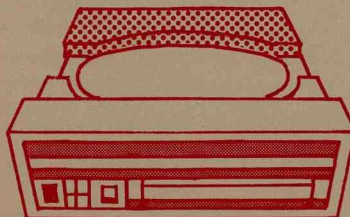
J105 Satellite CRT

1920 Character CRT
Standard keyboard
2K bytes memory
Dimensions:
Height: 14 inches
Width: 14 inches
Depth: 15.5 inches
Weight: 36 lbs.



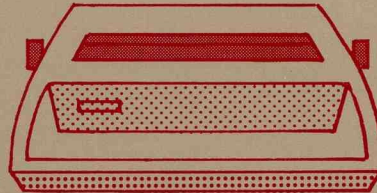
J50 Videocomputer

A single screen, stand alone system, the J50 has many features of the J100 at a significantly lower price. Up to 64K bytes memory. Full communications capability (asynchronous or bisynchronous). Up to four diskettes may be used. Ideal for distributed processing networks, word processing or business applications where only one work station is needed.



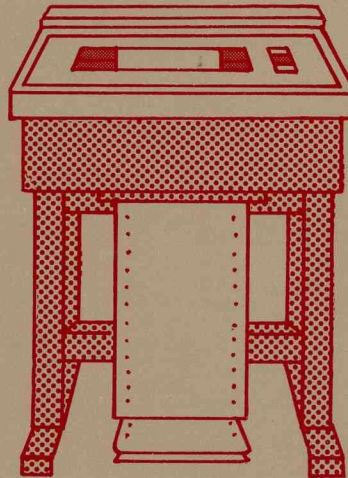
Cartridge Discs

Up to 4 drives per controller
Capacities range from 6 million bytes to 24 million bytes per drive



Character Printing

Low speed, typewriter quality:
Speeds up to 45 characters per second.
Office typewriter quality upper and lower case printing
Medium speed, high quality:
Speeds up to 220 characters per second



Line Printers

Speeds of 300 lines per minute and above
High quality, impact printing
132 print positions, 64 or 96 character set

Optical Character Reader

Allows typewriter generated copy and copy corrections to be read into the J100. Increases equipment utilization and cuts training costs. The OCR can also be used to read mag card information into the J100.
Speed: 180 to 240 pages per hour. Up to 220 characters per second.

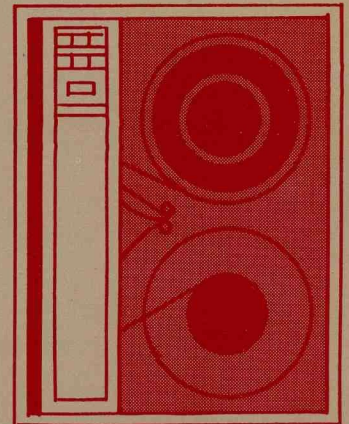
Storage Modules

80 Megabytes per drive
Up to 4 per controller



Magnetic Tapes

Industry compatible 7 track or 9 track
Phase encoded or NRZI



Data Communications Facilities

The J100 can communicate over telephone lines with:
RS-232C type devices
Other J100's
Other intelligent terminals
Key to disc systems
IBM and other main frame computers via 2780/3780 compatibility

This is achieved by the following hardware:

Single Line Asynchronous Controller for RS-232C type devices providing line speed options of 110 baud to 4800 baud.

8 line asynchronous Multiplexor for up to 8 RS-232C type devices. Line speed options of 110 baud to 4800 baud. Up to 2 speeds may be selected.

Single line Synchronous/ Isochronous/Asynchronous Controller (SILA) for high speed communications with an intelligent terminal or main frame computer.

Software That Outfoxes Costs. The software library consists of the System II Operating System and various Programming aids such as an Editor, an Assembler, Compilers, Utilities, File Access and Communications facilities. Each of these key elements is designed to contribute toward rapid and inexpensive application of the Videocomputer in Distributed Processing, Word Processing, or Stand-Alone Applications.

Software Features And Benefits.

Multiuser Support: Timesharing among different applications. Multiple jobs and multiple tasks within a job are supported.

Reentrant Programs: Multiple terminals can share a single copy of a reentrant application program in memory—significantly reduces total memory requirements.

Timesharing with Diskette Based Software: The smaller multiuser, multitask applications can be configured economically. No need for a large and expensive disk-based configuration.

Cartridge Disk or Multiple Platter Storage Module Options: Accommodates the larger user; provides for future growth. Storage available for any size data base.

Time Slicing for Multiple Tasks: I/O bound jobs are prevented from tying up system resources. Distributes processing power among all tasks. Simulates a CPU for each job.

SYSGEN Capability: The user may automatically generate a new operating system tuned to his current processing needs. This normally requires costly reinstallation efforts.

Device Independent I/O: All supported I/O devices are treated as sequential files—simple I/O calls access all devices.

File Sharing: More than one job may make I/O requests on the same disk file.

Sequential and Keyed Index (Data Base) File Support: Freedom to choose depending on the user's application—minimum access time and overhead.

Extensive Peripheral Support: Asynchronous and binary syn-

chronous communications lines, magnetic tape, teletype devices (RS-232), diskette, cartridge or storage module disk devices, printers, real time clock.

BASIC and Assembly Language Program Development: Field tested support for applications programming and systems software development. Two BASIC compilers, batch and interactive source editing, interactive BASIC test execution, assembler, on-line debugger, link-edit capability.

Flexible Terminal Support: Use the terminals for program development, as I/O devices for application programs and as operating system control consoles—concurrently and without degradation in operator response time.

Powerful Utility Support: Simple to use utility programs provide for processing control, configuration control, monitoring and debugging, and device and file control functions.

Detached (Background) Processing: Frees the terminal for other uses while a background job is executing.

Extended BASIC.

Jacquard's powerful extension of Dartmouth BASIC was designed for modern business applications and provides the following benefits:

Full File Management of Sequential and Keyed Index Files:

- Allows creation and maintenance of any size data base. Keyed files allow:
- Immediate access of any individual record.
 - Duplicate or unique keys.
 - Record lock.
 - Fixed or variable length records.
 - Record retrieval, addition, deletion or modification.

Extended Variable Labeling Capability: No restriction on the number of variables allowed in a program.

Integer and Decimal Arithmetic: Greater arithmetic capability.

Extensive String Manipulation Functions: Increases usage in business applications.

Sort/Merge Capability: Greater efficiency in data reduction and report generation. Records may be selected prior to the sort, sorted on up to 20 ascending or descending keys and output to any device in any report format.

N-Dimensional Arrays: Allows the definition of data structures with an unrestricted number of dimensions.

Nested and Multiple Loop Control: Provides processing flexibility.

Formatted Full Screen I/O: Allows sophisticated use of the terminal as a data entry and retrieval device with features such as three screen modes, protected and unprotected fields, programmable function keys, editing of operator input.

Subroutine Calls: The link-edit utility allows a BASIC program to reference external assembly language subroutines—added processing power.

Batch and Interactive Mode Program Development: Meets the needs of small and large users.

Run Time Support Embedded in the Operating System: Conserves memory. A single copy in memory serves all BASIC application programs. Also minimizes program storage space since these routines are not linked to each program.

All BASIC Programs are Re-entrant: Conserves memory. A single copy in memory may be shared by multiple users.

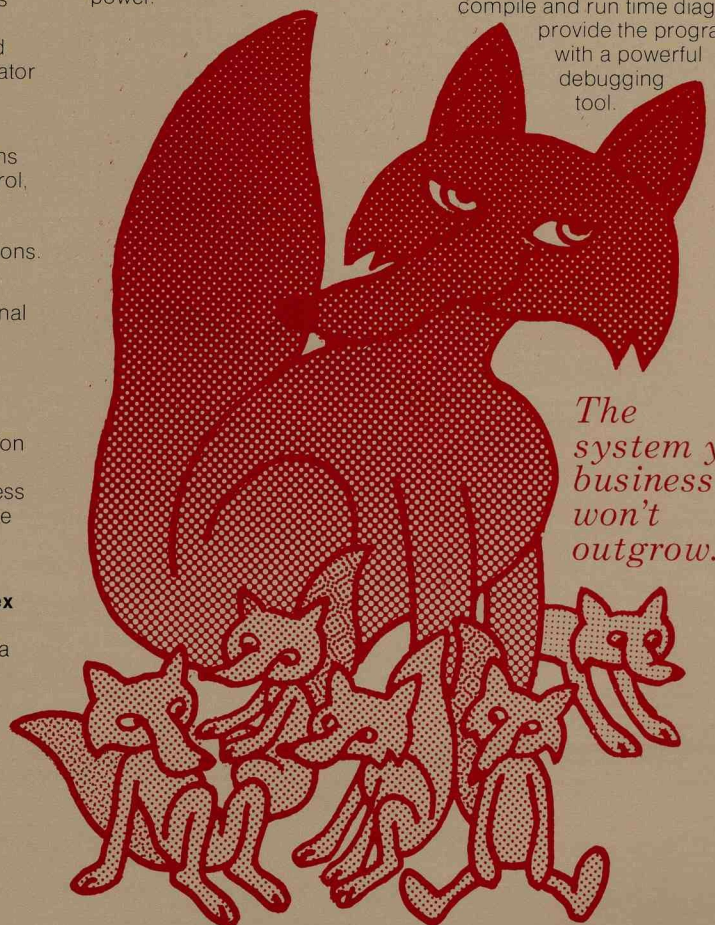
Extensive Peripheral Support: Easy access to all supported devices.

Interface to Communications Handlers: Distributed processing becomes a practical reality.

Concurrent Program Development and Execution: System need not be taken out of a production mode to develop/enhance applications.

Completely Self-Contained Program Generation Package: No other system required for program generation, testing and debugging.

Extensive and Unique Debugging: Conversational compile and run time diagnostics provide the programmer with a powerful debugging tool.



The system your business won't outgrow.

*Ahead
of the pack.*



 **Jacquard Systems**

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